

Drawings

As instructed by the Examiner, Applicant has revised new Figure 6 to include the isolated-integrator band reject filter. Applicant has submitted herewith a proposed amended new Figure 6 to the Official Draftsperson. A marked up version of originally submitted new Figure 6 is attached. Applicant respectfully requests the Examiner's approval of amended new Figure 6.

Status of the Claims

Claims 1-6 and 9-21 remain pending in the present application. Independent claim 6 has been indicated as allowed. Claims 3 and 19 are have been amended pursuant to 37 CFR §1.116 to be independent claims that include all the limitations of the base claim from which they previously depended. Applicant respectfully requests entry of amended claims 3 and 19 to place the application in better form in the event of an appeal. A marked up version of claims 3 and 19 is included as an attachment.

The Examiner has indicated in the official action mailed December 23, 2002 that claim 3 would be allowable if rewritten in independent form. Claim 19 was identified as rejected in the Official Action mailed December 23, 2002, however upon further discussion via telephone, the Examiner has indicated that the rejection of claim 19 was a typo, and that claim 19 would be allowable if re-written in independent form.

Applicant respectfully traverses and requests reconsideration of the rejected pending claims 1-2, 4-5, 9-18 and 20-21 in view of the following comments taken together with the Declaration Supporting Reconsideration of the Final Rejection submitted herewith as Exhibit 1.

The Declaration is from Mr. James Wordinger who is an electrical engineer with 24 years of experience in the field of electronics; electrical circuit design and electrical circuit operation related to electronic filters and audio power amplifier systems. Mr. James Wordinger is familiar with the general knowledge and experience of those skilled in the art of filters and

audio power amplifier systems. Mr. James Wordinger has concluded that amended new Figure 6 is supported by the specification of the application and does not introduce new matter. Mr. James Wordinger has further concluded that new amended Figure 6 is merely illustrative of paragraph 11 on page 3 of the specification and therefore does not introduce any new idea or concept to the application. Finally, Mr. James Wordinger has confirmed that the term "isolated integrator" has a plain meaning to those with ordinary skill in the art that is consistent with Applicant's specification and drawings.

New Matter

The Examiner has asserted that Applicant's amendment mailed on November 8, 2002 introduced new matter into the disclosure. Applicant's amendment added an additional paragraph to page 10 of the specification and a new drawing identified as Figure 6. Applicant respectfully disagrees that these amendments constitute new matter and respectfully requests the Examiner to reconsider this assertion.

One of ordinary skill in the art would recognize that the new paragraph is nothing more than a copy of existing paragraph 11 on page 3 of the original as-filed specification with the addition of element numbers. The added element numbers are the same element numbers used elsewhere in the specification to identify the elements discussed in paragraph 11 and in the new paragraph. Section 2163.06 of the Manual of Patent Examination Procedure (MPEP) states "information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter." Clearly, Applicant has done nothing more than restate information already contained in the specification in another part of the specification, which therefore cannot be considered new matter.

One of ordinary skill in the art would regard the amended new Figure 6 simply as a visual form of that which is described by both paragraph 11 on page 3 and the new paragraph.

The Examiner has asserted that the new paragraph describes a feedback control loop that includes an active low-pass filter "having both a feedback demodulation filter and an isolated-integrator frequency rejecting network." (*emphasis Examiner's*) Applicant does not understand the Examiner's use of the term "both" since the term is not present in either paragraph 11 on page 3 nor the new paragraph. In fact, the language of these paragraphs is "an active low-pass filter having a feedback demodulation filter and an isolated integrator frequency-rejecting network. In one embodiment, the isolated-integrator frequency-rejecting network is an isolated-integrator band-reject filter." As detailed in the Declaration of Mr. James Wordinger attached as Exhibit 1, one of ordinary skill in the art would not understand this text to preclude the embodiment illustrated in amended new Figure 6.

The Examiner has also indicated that "it is clear that new Fig. 6 does not include a feedback control loop additionally having an isolated integrator frequency-rejecting network as expressly disclosed on page 3." Applicant has submitted amended new Figure 6 to include the isolated-integrator band-reject filter as part of the feedback demodulation filter within the feedback control loop. As described in paragraph 46 of page 10 of the specification, "the feedback demodulation filter includes at least one isolated-integrator band-reject filter 20." Accordingly, the feedback control loop depicted in Figure 6 includes the feedback demodulation filter of which the isolated-integrator frequency rejecting network is a part.

The Examiner further contends that "ones skilled in the art would interpret the discussion from lines 9-11 [paragraph 11 of page 3] as reading only on the circuit shown in Fig. 5." The Examiner has also asserted that "the specification does not, in any way, enable one skilled in the art as to how to make any/or the invention of Fig. 6." Again Applicant respectfully disagrees and requests reconsideration.

Clearly paragraph 11 of page 3 does not teach, suggest or disclose the filter 46 depicted in Figure 5. In addition, as previously discussed, Figure 6 is nothing more than an illustration of the elements discussed in paragraph 11 interconnected as described in paragraph 11. Further,

the attached Exhibit 1 Declaration of Mr. James Wordinger who Applicant submits is one of skill in the art factually rebuts the Examiner's assertions regarding amended new Figure 6.

For at least the foregoing reasons, Applicant respectfully requests the Examiner to withdraw his objection pursuant to 35 U.S.C. 132 of the new paragraph on page 10 and amended new Figure 6.

Claim Rejections pursuant to 35 U.S.C. §112, first and second paragraphs

Claims 9-10 were rejected pursuant to 35 U.S.C. §112, first and second paragraphs as being non-enabling and indefinite. The Examiner has maintained his assertions that the connection between the output of the demodulation filter and the feedback control loop as critical or essential to the practice of the invention and that without this feature it cannot be understood from the specification how the circuit will operate. Based on the Declaration attached as Exhibit 1, as well as the previously discussed reasons, Applicant respectfully asserts that those of ordinary skill in the art would understand how the circuit operates.

Patent documents are not required to include subject matter known in the field of the invention, "to hold otherwise would require every patent document to include a technical treatise for the unskilled reader." S3 Inc. v. nVidia Corp., 259 F.3d 1364, 59 USPQ2d 1745 (Fed. Cir. 2001). "Although an accommodation to the common experience of lay persons may be feasible, it is an unnecessary burden for inventors and has long been rejected as a requirement of patent disclosures." Id. As detailed in the US Patent included with the Exhibit 1 Declaration of Mr. James Wordinger, it is well known that feedback signals may be provided from the output of the amplifier. In addition, as clearly indicated in the detailed description, the embodiment illustrated in Figure 5 is simply one embodiment incorporating Applicant's invention. Accordingly, the embodiment described in paragraph 11, the Abstract and the new paragraph is merely another embodiment. Further, if the Examiner accepts amended new Figure 6 and/or the

new paragraph, Applicant submits that the rejection of claims 9-10 pursuant to 35 U.S.C. §112, first and second paragraphs is moot.

Claim Rejections pursuant to 35 U.S.C. §102(b)

Claims 1, 2, 4, 5, 13-18, 20 and 21 were rejected pursuant to 35 U.S.C. §102(b) as being anticipated by Cavigelli (U.S. Patent No. 5,635,871 hereinafter referred to as "Cavigelli"). Applicant respectfully disagrees and respectfully requests reconsideration for at least the following reasons.

The Examiner has asserted that Applicant's specification has not provided a specific definition for the term "isolated integrator" and that the term does not have a well-known meaning in the art. The Examiner has further asserted that "band-reject filters inherently provide integration and include isolation." Applicant respectfully disagrees that there is no meaning in the art for the term and further disagrees with the Examiners interpretation of the term.

The Examiner is referred to the reference cited by the Applicant in form PTO-1449 paper no. 4 or 5 entitled "Tunable RC Null Networks," by Ralph Glasgal, Oct 1969 issue of EEE, p. 70-74. In addition, the Examiner is referred to the Background section of Applicant's specification, Applicant's prior art Figure 1, and paragraph 23 of Applicant's detailed description. As clearly defined in Applicant's specification and the Glasgal prior art reference, the plain meaning of the technical term "isolated integrator" has well-known meaning in the art. "A technical term used in a patent claim is interpreted as having the meaning a person of ordinary skill in the field of the invention would understand it to mean." Dow Chemical Co. v. Sumitomo Chemical Co., Ltd., 257 F.3d 1364, 59 USPQ2d 1609 (Fed. Cir. 2001).

In this case, the prior art in the field of the invention has clearly defined the plain meaning of the term "isolated integrator." In addition, Applicant has included Figure 1 and a detailed description in the application to reiterate the plain meaning of the term "isolated integrator." Applicant respectfully asserts that the dissection and application of definitions to

each word in the term "isolated integrator" is unwarranted and does not comply with the objective test of what one skilled in the art would understand the term to mean. Accordingly, Applicant respectfully requests the Examiner to reconsider the to 35 U.S.C. §102(b) rejection of claims 1 and 13.

The Examiner is also respectfully requested to consider the dependent claims of the pending application. As the Examiner is already aware, the notch filter (202) of Fig. 12A of Cavigelli is illustrated as an empty box. In addition to failing to teach that the notch filter of Cavigelli is an isolated integrator band-reject filter, Cavigelli also fails to teach the elements disclosed in the dependent claims of the pending application as Applicant discussed in the previous Official Action Response mailed November 8, 2002. An excerpt from the November 8, 2002 Office Action Response is reproduced below to again request consideration of the cited dependent claims:

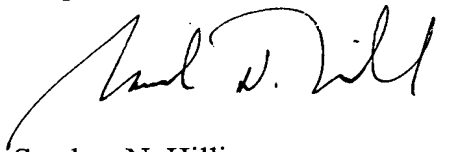
Further, neither the notch filter 202 or any of the amplifying stages 7, 13 and 19 of Cavagelli disclose a tuning resistor as disclosed in claim 2; a resistive forward signal flow branch as disclosed in claim 14; a first resistor and a second resistor with the isolated integrator band-reject filter connected therebetween as disclosed by claim 16; a resistive value of zero as disclosed by claim 17; or at least three capacitors and at least two resistors of equal value as disclosed by claim 18. In fact, none of the cited prior art references teach, suggest or disclose the isolated integrator band-reject filter disclosed in claims 1 and 13, or any of the elements disclosed by claims 2, 14, 16, 17 or 18.

For at least the foregoing reasons, Applicant respectfully requests the Examiner to remove the rejection pursuant to 35 U.S.C. §102(b) of independent claims 1 and 13 and dependent claims 2, 14, 16, 17 and 18. Alternatively, since dependent claims 2, 4-5 and 14-18,

dependent claims 2, 14, 16, 17 and 18. Alternatively, since dependent claims 2, 4-5 and 14-18, 21-22 depend from respective independent claims 1 and 13, removal of the 35 U.S.C. §102(b) rejection of these dependent claims is respectfully requested.

Applicant believes that claims 1, 2, 4, 5, 9-18, 20 and 21 are allowable in their present form and that this application is in condition for allowance. Accordingly, it is respectfully requested that the Examiner so find and issue a Notice of Allowance in due course. Should the Examiner deem a telephone conference to be beneficial in expediting allowance of this application, the Examiner is invited to call the undersigned attorney at the telephone number listed below.

Respectfully submitted,



Sanders N. Hillis
Attorney Reg. No. 45,712

Attachments: Version with Markings to Show Changes Made (p. 10)
Marked up version of Figure 6
Exhibit 1 - Declaration of Mr. James Wordinger (19 pages)

BRINKS HOFER GILSON & LIONE
One Indiana Square, Suite 1600
Indianapolis, Indiana 46204-2033
Telephone: (317) 636-0886
Fax: (317) 634-6701

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend Claims 3 and 19 as follows:

3. (Twice Amended) An active low-pass filter system including:
a low-pass filter circuit that includes a resistive forward signal flow branch and[The
system of Claim 1, wherein the low-pass filter circuit includes] a Sallen & Key filter[.]; and
an isolated-integrator band-reject filter coupled to the resistive forward signal flow
branch.
19. (Amended) An active low-pass filter system comprising:
a low pass filter circuit having an input terminal and an output terminal[The active
low-pass filter system of claim 13], wherein the low-pass filter circuit includes a Sallen &
Key filter[.]; and
an isolated-integrator band-reject filter incorporated into the low pass filter circuit
between the input terminal and the output terminal.

